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ILLUSTRATIONS OF FUNGI—III

WILLIAM A. MURRILL

Most of the species here figured belong to the large and important class of wood-destroying fungi, which are of special interest to the forester. While none of them are poisonous, most of them are too tough to be used for food. *Amanitopsis vaginata*, the only species described here that is not generally found on wood, must be carefully distinguished from the deadly species of *Amanita* when collecting it for the table.

Pholiota adiposa (Fr.) Quél.

FAT PHOLIOTA

Plate 7. Figures 1 and 2. $\times \frac{1}{4}, \frac{1}{2}$

Pileus firm, fleshy, convex to expanded, incurved at the margin, 4–7 cm. broad; surface very viscid when moist, shining when dry, lemon-yellow to egg-yellow, with conspicuous bay or testaceous scales, which often become darker, especially near the tip; flesh white or yellowish, almost tasteless, not poisonous; gills adnate, close, pale yellow or isabelline, becoming ferruginous; spores ellipsoid, smooth, ferruginous, $7-8 \times 5 \mu$; stem subequal, white or yellowish above, slightly darker below, squamose below the delicate, floccose annulus, 5–10 cm. long, 5–8 mm. thick.

This species is conspicuous and quite common in autumn in dense clusters on dead trunks and stumps of deciduous trees, in Europe and North America. It is rarely eaten, because of its

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slimy cap and almost tasteless flesh, but the caps can be easily peeled, and they are readily digested when young and fresh. The illustrations are made from specimens grown between sections of poplar trunks placed for several months in the basement of the museum building of the Garden. By separating the sections, an excellent view, as seen in figure 2, was obtained of the early stages of the young sporophores, as they grew outward toward the light from the fruiting mycelium near the center of the trunk.

***Inonotus dryophilus* (Berk.) Murrill**

OAK-LOVING INONOTUS

Plate 7. Figure 3. $\times \frac{1}{2}$

Pileus thick, unequal, unguliform, subimbricate, rigid, 7-8 \times 10-14 \times 2-3 cm.; surface hoary-flavous to ferruginous-fulvous, becoming scabrous and bay with age; margin thick, usually obtuse, sterile, pallid, entire or undulate; context ferruginous to fulvous, zonate, shining, 3-10 mm. thick; tubes slender, concolorous with the context, about 1 cm. long, mouths regular, angular, 2-3 to a mm., glistening, whitish-isabelline to dark fulvous, edges thin, entire to toothed; spores subglobose, smooth, deep ferruginous, 6-7 μ ; cystidia scanty and short; hyphae deep ferruginous.

This rare species occurs only upon oak trunks, and has been previously reported from Virginia, Wisconsin and three intermediate states. The accompanying figure was made from a rather abnormal specimen found last autumn in Bronx Park on a living white oak. The trunk of this tree was evidently attacked by the fungus from the base up to a height of fifteen or twenty feet, or more, as indicated by the appearance of the sporophores at points where dead limbs had been removed. The white oak is an exceedingly valuable tree, and any fungus that attacks it, even though rare, is of importance to the forester.

***Pholiota lutea* Peck**

YELLOW PHOLIOTA

Plate 7. Figure 4. $\times \frac{1}{2}$

Pileus thick, fleshy, firm, convex to nearly plane, 5-10 cm. broad; surface silky, squamulose near the center, flavous to

luteous, margin sterile and slightly incurved; flesh yellowish, of pleasant odor but bitter taste; gills adnexed to somewhat decurrent, yellowish to deep ferruginous; spores ellipsoid, ferruginous, $9 \times 5 \mu$; stem $5-7 \times 0.6-1$ cm., solid, firm, ventricose, fibrillose, concolorous below, nearly white above; ring rather large and conspicuous, soon colored by the copious spores.

This species is very handsome, occurring in conspicuous clusters on dead trunks in woods from August to October. Although separated from the European species *Pholiota spectabilis* by Professor Peck in 1898, it is very closely related to that species and might be considered only a variety of it by some authorities. Both species are considered very rare in this country. The illustration was made from specimens collected near Bronx Park by Mr. E. C. Volkert, September 24, 1908, and determined by Professor Peck. Another specimen was brought in last fall from Forked River, New Jersey, by Mr. W. H. Ballou.

Amanitopsis vaginata (Bull.) Roze

SHEATHED AMANITOPSIS

Plate 7. Figure 5. $\times \frac{1}{2}$

Pileus thin, fragile, companulate to expanded, 3-8 cm. broad; surface dry, glabrous, deeply striate on the margin, exceedingly variable in color, ranging from nearly white to reddish-brown; gills free, fragile, white; spores globose, smooth, hyaline, $8-10 \mu$; stem nearly equal, scarcely enlarged below, glabrous or adorned with minute scales, variable in color, hollow or stuffed within, 6-12 cm. long, 4-8 mm. thick, entirely devoid of a ring, but conspicuously sheathed at the base with a long, loose, white volva, portions of which are sometimes carried up as patches on the cap.

This attractive and very variable species is abundant in woods throughout Europe and North America during summer and autumn, and possesses excellent edible qualities. It may be distinguished from species of *Amanita*, some of which are deadly poisonous, by the total absence of a ring on the stem, although the conspicuous volva at the base suggests its close relationship to that genus. The variations in color presented by this species are often very bewildering to the beginner.

Ischnoderma fuliginosum (Scop.) Murrill

SOOTY ISCHNODERMA

Plate 7. Figure 6. $\times \frac{1}{10}$

Pileus very large, subimbricate, laterally connate, effused-reflexed, often covering the entire under surface of logs, the reflexed portion applanate, 5-15 cm. long, 10 to many cm. broad, 1-2.5 cm. thick; surface pelliculose, floccose, rugose, zonate, fuliginous, ivory-black and dark fulvous, with a conspicuous resinous appearance; margin acute, concolorous, inflexed on drying, entire or undulate; context fleshy, becoming corky with age, very firm and rather fragile when dry, light brown, 5-10 mm. thick; tubes pallid to umbrinous, 5-8 mm. long, mouths minute, white, angular, equal, becoming umbrinous and somewhat irregular with age, edges thin, fimbriate to lacerate; spores smooth, cylindrical, subcurved, hyaline, $4-6 \times 1.5-2 \mu$.

This species is rather common throughout the United States and Europe, occurring on stumps and fallen trunks of basswood, maple, fir, spruce, and certain other trees. When young it is rather fleshy, but soon becomes corky, and is always too tough for food. There is no evidence that it attacks living trees, but it runs rapidly over the under side of large logs, destroying the wood. The accompanying illustration was made from specimens growing on an old stump near the Lorillard mansion. Unfortunately, it was necessary to reduce them very much in size.